THE PLANT DISEASE REPORTER

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THE PLANT DISEASE REPORTER

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THE PLANT DISEASE SURVEY

Vol. IX August 15, 1925 Number 5

STEM RUST OF WHEAT (PUCCINIA GRAMINIS)

In the Rust Reporter, Volume 5: July 25, 1925 the following statement concerning stem rust in the winter wheat section appears.

> "The wave of hot, humid weather reported in our last issue broke on July 16, and since then a considerably lower temperature has prevailed. Unfortunately the cool period did not begin early enough to prevent the development of a severe epidemic of black stem rust in northwestern Minnesota, and South Dakota. It is hoped that the cool weather will continue long enough to permit North Dakota to escape a similar misfortune."

Judging from the weather data at hand, cool weather has continued in North Dakota during the first decade of August, however, recent information from the field as to the progress of stem rust has not been received.

NOTES ON BUNT OF WHEAT (TILLETIA LAEVIS AND T. TRITICI)

New York: Genesee & Wyoming Counties - Wheat fields show about 2-3% stinking smut. (Hayes, July 6)

Maryland: The county agent of Caroline County reports an unusual amount of bunt this year and is planning considerable seed treatment work for this fall. (Haskell, July 15)

Virginia: Reports indicate more than average injury but final survey data are not available as yet. (Fromme, July 1)

Ohio: Somewhat localized in western and southern Ohio but losses reported are much below the average season. (Thomas, July 15)

Wisconsin: No specimens seen or reported. (Vaughan, Aug. 1)

Minnesota: Very little bunt found in winter wheat. (Sect. Pl. Path.)

Kansas: At this date there seems to be less indication of damage from bunt than in 1924. The worst infected areas seem to be in northwestern Kansas. It is too early to state what the loss in Kansas will be for 1925. (Melchers, July 15)

Colorado: Five percent loss for the state. Untreated fields show 50% of heads smutted, treated grain, trace to 5%. Spring wheat infection, a trace. (Durrell, July 15)

Washington: Because of very heavy winter killing of fall seed grain, there is an unusual acreage of spring wheat. The amount of smut is therefore lower than it has been in some years, since there is very little smut in the spring wheat. (Dept. Pl. Path., Aug. 1)

Oregon: Present as usual. (Barss, July 15)

REPORTS ON THE LOOSE AND COVERED SMUTS OF OATS (USTILAGO AVENAE AND U. LEVIS)

Virginia: Average 3.5%. (Fromme, July 1)

South Carolina: More than usual. (Ludwig, July 1)

Georgia (southern): First observed April 28, Thomas County. Highest percent of infection in a field 40%, in Thomas County. Average percent of infection about 5. (Boyd, July 1)

Arkansas: Ustilago levis - Greatest amount, about 5% noted on spring oats. Very little found on winter oats.

Ustilago avenae - Greatest amount, about 20%, noted on spring oats. Winter oats not nearly as badly smutted. Does this have any connection with the fact that spring oats were as a whole far superior to winter oats in yield as well as in general vigor of plants? (Rosen, July 15)

Colorado: Ustilago levis - Some places 50%, more prevalent than loose smut in all earlier varieties. Other localities, particularly White Russian, quite free.

Ustilago avenae - Five to ten percent in some localities, trace in others. (Durrell, July 15)

Oregon: Present as usual. (Barss, July 15)

ANOTHER BACTERIAL LEAF BLOTCH OF OATS REPORTED (PSEUDOMONAS SP.)

H. R. Rosen of Arkansas, under date of July 15 writes as follows concerning a leaf blotch of oats caused by Pseudomonas sp. but distinct from the halo blight. Collaborators who can, will be glad to comply with his request

for material from other states.

> "Very common on certain varieties, particularly on Fulghum and Swedish Select, but not doing any serious damage. Differs from halo blight in that the yellowish or brownish, irregular spots are not surrounded by halos. Artificial infections with organism isolated from these spots also show no halos, while the halo blight organism, isolated by the writer, shows the typical halos on the same variety of oats. Will be glad to get material from other collaborators."

BACTERIAL WILT AND ROOTROT OF ALFALFA

The bacterial disease recently described in Phytopath. 15: 243-244 is reported on by L. E. Melchers of Kansas as follows:

> "The bacterial wilt or rootrot which F. R. Jones is working upon has been definitely found in many fields in Kansas. It was most conspicuous on the first crop and much less noticeable on the second cutting. It probably occurs in most of the counties growing alfalfa. It probably has been present for several years and has been a factor in relation to the socalled 'alfalfa failures' in the state."

Two articles by members of the Colorado Experiment Station, concerning what seems to be the same bacterial disease, have recently appeared.

1. Sackett, W. G. "Through the Leaves" 13: 213-214. May 1925.
2. Durrell, L. W., and W. G. Sackett. A rootrot of alfalfa. Science 62: 82-83. July 24, 1925.

OTHER ALFALFA DISEASES

Bacterial blight (Bacterium medicaginis (Sack.) EFS.

Kansas: Sackett's bacterial blight was widespread in the state. It is difficult to estimate the amount of damage it did. It was much less, however, than the bacterial wilt (Jones). A very heavy frost and freeze during the first crop perhaps was an important factor in its being so prevalent. (Melchers, July 15)

Stem blight (Pseudomonas medicaginis)

Utah: The cool wet season has greatly intensified the severity of stem blight of alfalfa. The disease occurred generally on the first crop throughout the entire state. Especially severe in Salt Lake, Cache, and Boxelder Counties. Fields have been observed which show a decrease yield of from 50 to 60%. A high average loss will result for the entire state. (Richards, July 2)

Crown wart (Urophlyctis alfalfae (Lagh.) Magn.)

Oregon: Considerable evidence of this disease in old plantings on College farm at Corvallis. Probably general in western Oregon where alfalfa has been established for some time. A factor in thinning the stand although not violent in its effects. Few farmers are aware of it. (Barss, July 15)

Stem rot (Sclerotinia trifoliorum Eriks.)

Oregon: Present but apparently not as severe as during the past few years in western Oregon and Rogue River Valleys. (Barss, July 15)

Downy mildew (Peronospora trifoliorum D By.)

Kansas: It was about as prevalent as usual but was more common in older fields, i.e., not confined to one-year-old fields as most generally is the case. No appreciable injury occurred. (Melchers, July 15)

Colorado: Quite prevalent over the state and in some cases a very heavy infection in June. (Durrell, Aug. 1)

Washington: Reported by County Agent Lovett, Yakima, as very severe on first crop in the Yakima Valley. (Dept. Pl. Path., Aug. 1)

Crown and rootrot (undetermined)

Kansas: A very peculiar crown injury on young alfalfa plants (1924 fall planted) occurred in May and June 1925. The injury consisted of definite lesions or constrictions just at the ground. This has been attributed by some to "winter injury" the result of planting unadapted seed. It has resulted in the complete or partial loss of hundreds of fields in Kansas. The problem is being carefully followed by the writer and cultural studies are under way. It does not seem to have any connection with Jones' bacterial blight.

In some fields "winter injury" would seem an adequate explanation, while in others this explanation is scarcely adequate. (Melchers, July 15)

POWDERY MILDEW OF RED CLOVER (ERYSIPHE POLYGONI DC.)

Not many reports of red clover powdery mildew have been received this year. The disease is still with us however. Notes from readers of this Reporter concerning the prevalence of this disease will be appreciated.

Massachusetts: Occurring throughout the state and increasing in severity. For three years the first diseased specimens have been found in the woods. It is believed that the source of

infection for Massachusetts lies with plants found in margins of woody tracts. (Osmun & Davis, Aug. 1)

New York: Powdery mildew of red clover was observed on June 24. (Felix, July 6)

Oregon: The powdery mildew has again begun to appear at Corvallis. How general and widespread we do not know as yet. (Barss, July 15)

Canada - Manitoba: Powdery mildew first found 1922; abundant 1923; not so common in 1924; considerable now starting. (Bisby, July 11)

APPLE SCAB (VENTURIA INAEQUALIS) AS REPORTED FROM NEW ENGLAND

Maine: Abundant on home-lot trees, probably mostly those not sprayed. On 10% of fruit in McIntosh orchards receiving no prepink; infection centers apparently being spots on lower surfaces of first leaves from ascospores discharged before pink application. On Ben Davis experimental check plots; only 10% of leaves infected and 1% of the fruit. Here the first ascospore infection occurred about May 15, the pink application was made May 20, the first conidial infection occurred June 7, and the second-cycle conidia appeared about June 27. (Folsom, July 15)

Massachusetts: Primary infection was very light owing to dry weather prevailing throughout the critical period in the spring. Continued wet weather during July has greatly increased secondary infection especially where the usual spray schedule was not closely adhered to. In general, however, the disease should not be serious in this state. (Osmun & Davis, Aug. 1)

APPLE FIREBLIGHT (BACILLUS AMYLOVORUS)

Massachusetts: Severe blossom and twig infection throughout the state. The quince seems to suffer more than the apple. Relatively little on pear. (Osmun & Davis) August 1)

Wisconsin: Additional reports indicate fireblight to be more widespread and destructive than for many years. It is causing great damage to home orchards. (Vaughan, Aug. 1)

Kansas: Fireblight is quite abundant in this district and is present in orchards and in the nurseries on one and two year old apple trees. Nursery trees with the blight are cut back at the ground and the tops burned. Jonathan and McIntosh trees are badly infected. In one case the entire block of one year old Jonathan trees was cut back on this account. (Muncie, July 13)

Washington: I have already reported the rather epidemic occurrence of fireblight in Washington this season. I find the disease in severe form, more widespread than was first anticipated. The

cold moist growing conditions of our spring season evidently brought the trees into a susceptible condition for blight infection, as it is more severe than it has been for many years. (Dana, July 24)

BITTERROT (GLOMERELLA CINGULATA) OF APPLES DEVELOPING IN VIRGINIA

"First appearance on fruit at Crozet, July 3 and at Winchester, July 7. First spores collected from overwintered mummies on June 24. Infection has developed fairly rapidly and if weather remains favorable there may be considerable injury. (Fromme, July 15)

CHERRY DISEASES IN OREGON

Leafspot (Coccomyces hiemalis Higg.)

"The Cylindrosporium leafspot which also causes serious shrivelling of fruit by attacking the pedicels of sweet cherries has been unusually abundant in western Oregon due to protracted spring rains and much damage has resulted to the small crop of fruit which set this spring. Defoliation from this cause is taking place already in many orchards also." (Barss, July 1)

Bacterial gummosis (Bacterium cerasi Griffin)

"The results of this disease seem to be unusually severe this season. In the first place the extreme low temperatures (below zero) of the last Christmas season may have accelerated the canker and girdling activity of the bacteria attacking tree bodies of sweet cherries. In the second place the cool moist spring seems to provide an unusual amount of spur blight and leaf spotting. These leaf spot areas are often large. They frequently drop out and leave a lacy effect on the trees." (Barss, July 1)

PLANT DISEASES IN NORTHERN OHIO

Plant pathologists of Ohio Agricultural Experiment Station report results of recent field trip

A three day plant disease survey was made by Ohio plant pathologists July 30, 31 and Aug. 1. The territory visited included roughly the region along lake Erie between Toledo and Cleveland, and extending southward about sixty miles. Attention was given chiefly to small fruits and vegetables. Muck areas, especially in the vicinity of McGuffey, Plymouth and Lodi, were observed. A portion of the extensive acreage of sugar beets in northwestern Ohio and the intensive truck crop area near Cleveland were also included in the itinerary.

Crop conditions, in general, are fairly satisfactory in view of the drought persistent in the spring months. Abundant summer rains, however, have exerted an evident influence on disease-outbreak.

Tomato Diseases

The tomato disease situation in Ohio is, in some respects, similar to what it has been in previous years, whereas in others, variations are to be noted.

Fusarium wilt (Fusarium lycopersici) is not an outstanding disease this year. Diseased plants can be found at nearly every planting, only in greenhouse culture were serious losses noted.

Nematodes (Heterodera radicicola) were found in a few houses in the Cleveland district. However, serious reduction in yield was noted in all cases.

Leaf mold (Cladosporium fulvum) This disease was not difficult to locate, infections varied from a trace to 100%. It is the practice of some growers to encourage the development of this disease in the latter stage of the crop in order to hasten ripening. Where any attempt whatsoever was made to control it through ventilation and reduction of moisture supply, the disease was held well in check.

Mosaic is of slight significance in northern Ohio this year, except in isolated cases where infection apparently occurred when the plants were in the seedling stage.

The Streak disease of tomato is becoming more conspicuous each season, being found not only in greenhouse culture, but also in field tomatoes. In many cases, however, this seems to be associated with mosaic symptoms. Decided stunting of the plants and reduction in yield are the most marked symptoms where the disease occurs.

Potato Diseases

Rhizoctonia In the late potato growing district throughout northwestern Ohio, fields were noted where Rhizoctonia is causing considerable loss. The loss is due to missing hills and weak plants. Characteristic lesions are present on the underground portion of the plants. In some cases the entire plant is girdled.

Fusarium wilt No great amount of loss was observed in any one field due to Fusarium wilt. However, scattered plants affected with Fusarium wilt are present in most fields. No fields were noted where the fungus appeared to be in the soil and doing serious damage to the crop. The occasional diseased plants are probably the result of infected seed pieces.

Raspberry Diseases

Eastern blue stem - Eastern blue stem is perhaps the most serious disease of the black raspberry in the raspberry-growing regions of northern Ohio. The extent of the damage due to this disease cannot be closely estimated. In addition to immediate loss through reduction of the crop, growers suffer a greater loss occasioned

by shortening of the productive life of plantations necessitating renewal every three or four years.

Crown gall At present crown gall is not a serious problem of raspberry growers in Ohio. Raspberry plants grown in Ohio seem to be generally free from galls. Where fields are found heavily infested, the plants have, as a rule, been purchased in other states.

Leaf curl, Mosaic, Blue stem or Wilt (Verticillium sp.), Anthracnose (Plectodiscella veneta) and Cane blight (Leptospheria coniothyrium) occur commonly in Ohio raspberry fields and cause more or less loss each year.

Sugar Beet Diseases

Black root (Phoma betae) In a general survey of the sugar beet section of the state it was found that black root was quite generally distributed and causing heavy losses. On the 50,000 acres originally planted to sugar beets 5000 to 8000 acres have been replanted to other crops, largely on account of Phoma. The unfavorable growing conditions during May and June were partially responsible for the severe epidemic. However, the disease is becoming more severe from year to year and at present in some sections no attempt is being made to grow sugar beets. In a careful check up, it was found that the epidemic did not have its source on the seed.

Rhizoctonia rootrot- This disease is less general in the sugar beet growing section, yet in some sections is causing considerable loss. In every case it is most severe in acid soils.

Leafspot (Cercospora beticola) The Cercospora leafspot was noted quite generally throughout the beet section, and in some localities was reaching the epidemic stage as early as July 20. It may be expected, with favorable weather condition for its development and the lateness of the beets, to cause considerable loss.

Celery Diseases

Late blight (Septoria apii) No cases of severe injury were observed in the regions visited. Traces of the disease were noted at Cleveland.

Bacterial blight (Bacterium apii) A few cases observed near Cleveland.

Yellows, Stunt, or Rootrot(caused by Fusarium sp.) A striking instance of this disease was noticed near Cleveland and also near Lodi.

Mosaic - Trace observed at Weston.

Cucumber Diseases

It is difficult to find a planting of cucurbits where there is not some evidence of the Bacterial wilt disease. Contrary to usual symptoms, this disease does not appear to be started by infection of the stem at the surface of the ground. The number of leaf infections noted this season has been large compared with other seasons. It may be safely estimated that 90% of the cucumber plantings in northern Ohio show varying amounts of the bacterial wilt trouble.

Onion Diseases

Pink root (Fusarium malli) General over the state wherever onions are grown. In a few fields the disease is apparently doing considerable damage. Losses may prove to be heavy locally.

Smut (Urocystis cepulae) Traces of smut were found frequently over the onion district. Good control seems to have been effected by the usual formaldehyde treatment.

Destruction of onions by wind - Near McGuffey, where a large acreage obtains, heavy winds the latter part of May blew out a greater portion of the crop. Replanting followed, but the loss will still be heavy.

Cabbage Diseases

Yellows (Fusarium conglutinans) Observed in nearly all fields to some extent; heavy infection in one region. The disease, in one case noted, was more serious where cabbage had been grown on the land in years previous. Yellows complicated by black rot in some cases.

Black rot (Bacterium campestre) Not generally damaging, although in one case some destruction was noted. In another instance black rot was apparently associated with yellows, or wilt.

Club root (Plasmodiophora brassicae) At Cleveland and Lodi cases of club root were seen. In the former case the disease was damaging in a field which had been planted to crucifers in years past. At Lodi, the percentage of infection was high.

Eggplant

Wilt, apparently Verticillium wilt, noted near Cleveland. Evidence in one case indicated that the fungus was seed-borne.

Pepper

A case of mosaic observed near Weston in a small planting.

Sweet Corn

Traces of smut here and there; tassel infection most common. Losses slight.

A NEW STEMROT OF BEAN IN SOUTH CAROLINA

C. A. Ludwig of the South Carolina Agricultural Experiment Station, on July 15 writes as follows:

> "The foot or stemrot of beans, caused by, or at least accompanied by Macrophoma phaseoli Maub., which was first reported for this country from this state a couple of years ago, has been present in some abundance in the northwest part of the state again this year. Prof. C. O. Eddy, of the Entomology Division, who examined beans in a good many gardens in connection with work with the Mexican bean beetle, submitted specimens early in June with the comment that the disease was in nearly all the gardens and promised to be serious. The material at that time was mostly immature, but a few mounts were secured which showed spores identical morphologically with those secured two years ago.
>
> "On July 9, following a long and severe dry spell, I visited some of the gardens in which the disease had been found. At that time the disease seemed to be in perfect control, apparently as a result of dry weather. Only a few diseased plants could be found. These were old plants and were either dead or much weakened. Young plants from recent seedings were not affected. The fungus on affected plants, however, was usually mature, spores being present in the pycnidia in great abundance.
>
> "The trouble in 1923 made its appearance considerably later than this year, our record cards being dated July 25 and August 13. Reference to the rainfall record for that year shows that it was well sustained through July. The evidence would indicate, therefore, that the disease is dependent on abundant moisture and that it need not be feared in dry weather."

BEAN ANTHRACNOSE (COLLETOTRICHUM LINDEMUTHIANUM) SLIGHT IN MICHIGAN

On July 15 the Department of Botany, Michigan Agricultural Experiment Station reported that very dry weather over most of the state had prevented the development of anthracnose and that the bean crop as a whole was very free from disease at that time. Collaborators in Massachusetts and Wisconsin also report only slight damage from anthracnose.

THE CANTALOUPE DISEASE SITUATION IN SOUTH GEORGIA

Leaf blight (Macrosporium cucumerinum)

> "Less severe in general than last year, although it made rapid progress in blighting down the vines after the bulk of the crop had been picked.
>
> "First appearance in commercial fields about June 1. Present in all parts of fields by June 7, date when shipping in the earlier fields began. By June 18 shipping over in the earlier fields and

100% leaf infection with 5% of the hills dead. The loss in earlier fields 10%; in later fields (one or two weeks later) 40%. Average loss 25%.

"Acreage this year about one-tenth that of 1923. Cantaloupe production falling off rapidly due to combination of poor marketing system and disease."

Powdery mildew (Erysiphe cichoracearum)

"Powdery mildew entailed more loss outside the commercial fields than any other disease this year, principally to small truck and garden patches of later plantings. In some fields the loss ran as high as 50%. Of little consequence in the earlier large plantings. First noted June 15 as isolated hills in small fields, but by July 1 had spread over wide areas in fields. Loss - 1% in commercial fields and about 15% in the garden and truck patches, principally Rocky Ford."

Other diseases

"Corcospora leafspot - Very light infection.
Downy mildew - Of no importance.
Bacterial wilt - Of no importance.
Fruit rot (Sclerotium rolfsii) 1% loss in gardens.
Anthracnose - Showed up late in season in gardens, too late for much damage." (Boyd, Aug. 1)

DOWNY MILDEW (PSEUDOPERONOSPORA CUBENSIS) OF CUCUMBER

Georgia (southern): Importance only slight as compared with 1924. First appearance in commercial fields June 25 after bulk of crop had been marketed. It then failed to over run the discarded fields as in 1924. The principal damage confined to a few small garden plots where loss ranged from 5-50%. Estimated loss 1%. (Boyd, July 15)

Massachusetts: Becoming serious in the field. (Osmun, Aug. 1)

South Carolina: Very light throughout the state. Found to a limited extent in Charleston County but no serious outbreak noted. (Moore, Aug. 1)

WATERMELON DISEASES IN SOUTH GEORGIA

Blossom-end rot

"More common generally than in 1924. First observed May 25 on melons 3 to 10 inches long. The period of greatest infection was May 30 to June 10, during which most of the imperfectly formed melons showed the disease. In two fields 80% of oldest melons were pruned off due to ill shape, 50% of which were affected with blossom-end rot. Diplodia less commonly isolated than Pythium sp. and Sclerotium bataticola. The latter fungus when inoculated in blossom end of both imperfectly and perfectly formed fruits (1 to 4 inches long) proved pathogenic. (Boyd, July 15)

Anthracnose (Colletotrichum lagenarium)

"First observed May 25 in Thomas County. Appeared in the majority of commercial fields of southern counties June 10 to 15. Early stages of pox plentiful on melons being loaded into cars on June 15. Spread of leafspot and pox only gradual from June 15 to July 15 but plenty of both in all fields. Severe defoliation occurred only at the end of the shipping season, July 15 to 20. Leafspot had little effect on yield, but pox was common throughout the shipping season and severe from July 1 to 20. Probable loss in yield and quality about 20%." (Boyd, July 15)

Gummy stem blight (Mycosphaerella citrullina)

"First observed May 25 in the station field. Generally less common than in 1924. Most prominent where melons were planted one to two years after melons. Highest percentage of infection about 10% with a loss of 2% of the hills before shipping season half over (5 acre field, Thomas County). Estimated loss 0.5%." (Boyd, July 15)

Stem-end rot (Diplodia sp.)

"First observed July 2 in Thomas County. Less common than in 1924; seen only 4 or 5 times in the field." (Boyd, July 15)

Wilt (Fusarium niveum EFS.)

"Less noticeable in general than in 1924. Very little observed before June 10. First observed on June 1 in Thomas County. Stable manure most common source of inoculum, followed by infested soil as second. Very common where only 1 to 3 years elapsed between plantings. Highest percentage loss in any field found was 40% in Thomas County. Estimated loss about 1%. Date of heaviest loss June 15 to 25." (Boyd, July 15)

FUSARIUM WILT (FUSARIUM LYCOPERSICI) OF TOMATO

Maryland: More prevalent than last year in susceptible varieties. Ten percent in one field in Ann Arundel County on farm of Alfred Stinchecorn, Pasadena. (Jehle, Aug. 3)

Virginia: More prevalent and destructive than in average season. The hot dry weather has favored its development. (Fromme, Aug. 1)

Georgia: (southern) Less prevalent than in 1924 although a few commercial fields showed from 1 to 10%. Most common in gardens. Showing worse on second planting (now reaching blossom stage) than in first. Estimated loss to early crop 2%. (Boyd, July 15)

Arkansas: Important. Appeared early in southern and central Arkansas. Many home gardens of tomatoes are a complete

failure. Canning crop is late and not as much reported as usual at this date. (Young, Aug. 1)

Utah: Fusarium wilt of the tomato is showing up in the usual number of fields throughout the state. The extremely warm dry period from July 12 to 22 appeared to greatly intensify the symptoms in the various areas. (Richards, July 1)

California: Wilt begins to show up in various sections of the state but the losses from this disease have not yet been serious this summer. It may partly be due to the fact that many growers are now using Norton variety when the infection of the soil with tomato wilt Fusarium is suspected. (Shapovalov, July 30)

TOMATO MOSAIC

Utah: Tomato mosaic is found to be especially severe in Davis County. A number of fields show heavy infestation. In some cases up to as much as 75 or 80%. Exact distribution and severity for other parts of the state is at present unknown. (Richards, July 14)

Oregon: Apparently this disease is widespread and probably doing some damage. (Barss, July 15)

YELLOW BLIGHT OF TOMATO IN CALIFORNIA

"There is another severe outbreak of western tomato blight in California. This year, however, the epidemic extends over a much greater area than it did last year. By the first week in July only 5 to 10% of the plants remained in the majority of fields in the Sacramento and the Modesto sections and even less in Kern County. The conditions near Merced at that time appeared somewhat better and in a number of fields 40 or 50% of the crop was still unaffected. The amount of blight in Santa Clara Valley, south of San Jose and in the nearby sections, was not in excess of 20%, and it was practically absent on the peninsula north of Santa Clara. In the vicinity of Riverside the disease has developed to date to the extent of about 30%, but it is quite negligible in the coastal sections of Los Angeles and Orange Counties. The early part of the season this year was unusually cool, and this condition was apparently responsible for the extremely injurious effect of a hot and dry spell that followed. (Shapovalov, July 30)

LATE BLIGHT OF POTATO MAKES ITS APPEARANCE IN NEW ENGLAND

As will be seen from the accompanying reports, late blight (Phytophthora infestans) was noted in Maine on July 28 and in Massachusetts July 19 showing that inoculum is present. According to weather data and precipitation for

July in the principal late potato states was normal or above normal and the first two weeks in August have been wet in many sections. It would appear, therefore, that moisture conditions have been favorable for the late blight fungus.

Maine: On July 28, late blight had destroyed one-fifth of the foliage and had girdled some of the stems in one field in the central part of the state. In this field the tops filled the space between the rows and had received about 150 gallons of Bordeaux mixture per acre to date. No other field seen had more than a trace. (Folsom, Aug. 1)

Massachusetts: Found on a single volunteer plant July 19. Weather conditions throughout July apparently favorable to development of the disease but no other cases have been reported. (Osmun & Davis, Aug. 1)

POTATO MOSAIC AND RELATED DISEASES

Massachusetts: Not much in evidence up to date. Serious in a few fields. (Osmun & Davis, Aug. 1)

Ohio: In fields from home grown seed, mosaic is quite evident. The mosaic that can be seen is of the severe or Rugose type. Seldom does a plant appear to have mild mosaic. Our temperature is such that the symptoms are masked. (Tilford, Aug.1)

Michigan: Symptoms masked on early plantings. H. C. Moore, Extension Specialist, reports that the general use of certified seed by commercial growers has reduced greatly the amount of degeneration diseases in the state. The amount found in small plantings of common stock is unusually high. (Kotila, Aug. 1)

Wisconsin: First appearance at Spooner about July 25. Earlier expression marked by high temperature. Indexed stock shows marked freedom from mosaic. Roguing is practiced as soon as the disease appears. (Vaughan, Aug. 1)

Washington: Apparently less mosaic and leafroll than usual owing to greater emphasis on the use of certified seed. Witches' broom occurs in some fields. (Heald, Aug. 1)

DOWNY MILDEW OF CORN AND SETARIA SPECIES

The first report of Sclerospora graminicola on corn in this country comes from the pathologists at the Iowa Experiment Station. They have infecte corn with material from Setaria viridis and also have found the fungus occurring naturally in the field. More information is needed concerning the importance and distribution of this parasite on all its hosts. Doctor Melhus will be very glad to examine specimens and to make identifications.

> "Sclerospora graminicola occurring on Setaria viridis has been transferred, under the greenhousx conditions and in the open to dent, flint, pop and sweet corn. Naturally infected corn plants have also been collected in the field, although this spring and summer has been very unfavorable for the best development of Sclerospora.
>
> "Enough evidence is at hand to establish definitely that Sclerospora occurs on corn in this country. However, nothing is known about its prevalence and economic importance. In order to learn something about this disease yet this season, it would be very desirable to have the distribution of Sclerospora on species of Setaria and other grasses. Our observations indicate that at this season of the year, at least here in Iowa, many of the Sclerospora infected corn plants have died or grown away from the organism. In other cases the characteristic symptoms are masked.
>
> "The symptoms on Setaria are generally known and therefore are not given. The symptoms on corn are as follows: Light-yellowish mottled areas are produced which have a tendency to extend longitudinally between the veins. These cover nearly the whole leaf. As the plant matures some of the spots become dry and dead. In some plants the symptoms may appear as definite lighter stripes extending the full length of the leaves. Stunting is always very noticeable, the leaves becoming bunched and erect due to the shortening of the internodes. Many plants appear normal except for the long, narrow stripes and the fact that they are much smaller than healthy plants of the same age. In rare cases infected side shoots have been found on apparently healthy stalks. Other plants, in addition to showing stunting and mottling, may be deep green in color. It does not sporulate readily on corn." (I. E. Melhus, Aug. 11)

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